Contents of *Aquaculture*, Volume 104

VOL. 104 NOS. 1/2 **1 JUNE 1992**

Announcement from the Publisher v

Diseases, Parasites and Predators

Use of antibiotics in the mariculture of giant clams (F. Tridacnidae)
W.K. Fitt (Athens, GA, USA), G.A. Heslinga and T.C. Watson (Koror, Palau) 1

Prevention of transmission of the crayfish plague fungus (*Aphanomyces astaci*) to the freshwater crayfish *Astacus astacus* by treatment with $MgCl_2$
J. Rantamäki, L. Cerenius and K. Söderhäll (Uppsala, Sweden) 11

Disease resistance in rainbow trout (*Oncorhynchus mykiss*) selected for stress response
S.E. Fevolden, T. Refstie (Sunndalsøra, Norway) and K.H. Røed (Oslo, Norway) 19

Resistance to oxytetracycline, oxolinic acid and furazolidone in bacteria from marine sediments
K. Nygaard (Oslo, Norway), B.T. Lunestad (Bergen, Norway), H. Hektoen, J.A. Berge and V. Hormazabal (Oslo, Norway) 31

Genetics and Breeding

Comparison of rainbow trout (*Oncorhynchus mykiss*) strains for body weight, length and age at maturity in different Swedish production systems
S. Sylvén and P. Elvingson (Uppsala, Sweden) 37

Gynogenesis in common carp (*Cyprinus carpio* L.). III. The effects of inbreeding on gonadal development of heterozygous and homozygous gynogenetic offspring
J. Komen, G.F. Wiegertjes, V.J.T. van Ginneken, E.H. Eding and C.J.J. Richter (Wageningen, Netherlands) 51

Husbandry and Management

Effects of fish size at harvest, initial stocking density and tank lighting conditions on the habituation of pond-reared yellow perch (*Perca flavescens*) to intensive culture conditions
J.A. Malison and J.A. Held (Madison, WI, USA) 67

Lipid and fatty acid composition of milkfish (*Chanos chanos* Forsskal) grown in freshwater and seawater
I.G. Borlongan and L.V. Benitez (Iloilo City, Philippines) 79

Nutrition

The importance of *n*-3 highly unsaturated fatty acids for growth in larval *Sparus aurata* and their effect on survival, lipid composition and size distribution
W.M. Koven, A. Tandler, G.Wm. Kissil (Eilat, Israel) and D. Sklan (Rehovot, Israel) 91

Synthetic astaxanthin deposition in pan-size coho salmon (*Oncorhynchus kisutch*)
B.E. Smith, R.W. Hardy (Seattle, WA, USA) and O.J. Torrissen (Matredal, Norway) 105
Water-soluble vitamin requirements of tilapia. 1. Pantothenic acid requirement of blue tilapia, *Oreochromis aureus*
A.K. Soliman and R.P. Wilson (Mississippi State, MS, USA) 121

Physiology and Endocrinology
Effects of temperature and size on oxygen consumption and ammonia excretion by walleye
Y.-J. Cai and R.C. Summerfelt (Ames, IA, USA) 127
Acute effect of sublethal ammonia concentrations on common carp (*Cyprinus carpio* L.). I. Effect of ammonia on adrenaline and noradrenaline levels in different organs
Zs. Jeney (Szarvas, Hungary), J. Nemcsók (Szeged, Hungary), G. Jeney and J. Oláh (Szarvas, Hungary) 139
Acute effect of sublethal ammonia concentrations on common carp (*Cyprinus carpio* L.). II. Effect of ammonia on blood plasma transaminases (GOT, GPT), GlDH enzyme activity, and ATP value
G. Jeney (Szarvas, Hungary), J. Nemcsók (Szeged, Hungary), Zs. Jeney and J. Oláh (Szarvas, Hungary) 149
Temporal effects of restricted diet and compensatory increased dietary intake on thyroid function, plasma growth hormone levels and tissue lipid reserves of rainbow trout *Oncorhynchus mykiss*
K.J. Farbridge, P.A. Flett and J.F. Leatherland (Guelph, Ont., Canada) 157
Fertility of rainbow trout males relative to differences in the proportion of sperm that binds to a specific antibody
D.E. Trummel, K.D. Fulcher, J.C. Beck and J.G. Cloud (Moscow, ID, USA) 175
The minimum effective dosage of 17α-methyltestosterone for induction of testicular maturation in the striped mullet, *Mugil cephalus* L.
C.-S. Lee, C.S. Tamaru, C.D. Kelley, G.T. Miyamoto and A.M. Moriwake (Honolulu, HI, USA) 183

VOL. 104 NOS. 3/4 **15 JUNE 1992**

Announcement from the Publisher ii

Economics and Marketing
A financial analysis of integration in aquaculture production: the case of hybrid striped bass
C.M. Gempesaw II, F.F. Wirth III and J.R. Bacon (Newark, DE, USA) 193

Genetics and Breeding
Inheritance of susceptibility to *Ceratomyxa shasta* (Myxozoa) in rainbow trout and the effect of length of exposure on the liability to develop ceratomyxosis
A.M. Ibarra, R.P. Hedrick and G.A.E. Gall (Davis, CA, USA) 217

Husbandry and Management

Effects of stocking density and aged sediment on tiger prawn, *Penaeus monodon*, nursery system
W.-M. Ray and Y.-H. Chien (Keelung, Taiwan) 231
Effects of ammonia on growth and molting of *Penaeus japonicus* juveniles
J.-C. Chen and Y.-Z. Kou (Keelung, Taiwan) 249
Artificial incubation of crayfish eggs (*Pacifastacus Ieniusculus* Dana) from early stages of embryonic development
J.M. Carral, J.D. Celada, J. González, V.R. Gaudioso (León, Spain), R. Fernández and C. López-Baissón (Soria, Spain) 261

Nutrition

Dietary lysine requirement of juvenile hybrid striped bass (*Morone chrysops*×*M. saxatilis*)
C.N. Keembiyehetty and D.M. Gatlin III (College Station, TX, USA) 271
Effects of dietary soybean and fish-protein ratios on growth and body composition of red drum (*Sciaenops ocellatus*) fed isonitrogenous diets
R.C. Reigh and S.C. Ellis (Baton Rouge, LA, USA) 279
Effects of dietary soybean and cod-liver oil levels on growth and body composition of gilthead bream (*Sparus aurata*)
N. Kalogeropoulos, M.N. Alexis (Athens, Greece) and R.J. Henderson (Stirling, UK) 293
Water-soluble vitamin requirements of tilapia. 2. Riboflavin requirement of blue tilapia, *Oreochromis aureus*
A.K. Soliman and R.P. Wilson (Mississippi State, MS, USA) 309
Evaluation of duckweed (*Lemna perpusilla* and *Spirodela polyrrhiza*) as feed for Nile tilapia (*Oreochromis niloticus*)
M.S. Hassan and P. Edwards (Bangkok, Thailand) 315
Initial feeding of European minnow larvae, *Phoxinus phoxinus* L. 1. Influence of diet and feeding level
P. Kestemont (Namur, Belgium) and J.M. Stalmans (Gembloux, Belgium) 327
Standard experimental diets for crustacean nutrition research. II. Growth and survival of juvenile crayfish *Astacus astacus* (Linné) fed diets containing various amounts of protein, carbohydrate and lipid
H. Ackefors (Stockholm, Sweden), J.D. Castell, L.D. Boston (Halifax, N.S., Canada), P. Räty and M. Svensson (Stockholm, Sweden) 341

Physiology and Endocrinology

Importance of body size for acclimation of underyearling Atlantic salmon parr (*Salmo salar* L.) to seawater
V. Bjerknes (Bergen, Norway), J. Duston, D. Knox and P. Harmon (St. Andrews, N.B., Canada) 357
Presence of an estriol-like steroid in the blue crab, *Callinectes sapidus*
E.W. Sasser and C.A. Singhas (Greenville, NC, USA) 367
Gonadotropic hormone-releasing hormone analog (GnRH-A) induced ovulation and spawning in female winter flounder, *Pseudopleuronectes americanus* (Walbaum)
S.A. Harmin and L.W. Crim (St. John's, Nfld., Canada) 375

Book Reviews
Genetics of Chinese carps 391
Culture of salmonid fishes 393
Phosphorus in freshwater ecosystems 394

Books Received 395

Erratum 395

Announcement 396

Author Index 397

Contents of *Aquaculture*, Volume 104 401